

NE-1032

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ABSTRACT OF THE DISCLOSURE

1 In a communication network, end-user systems are connected via a
2 common transmission medium to a timeslot assignment unit. Each end-user
3 system has a buffer for storing packets, and a queue length detector for
4 detecting a queue length of the stored packets. The end-user system
5 forwards packets on assigned timeslots to the network and transmits a signal
6 for indicating the detected queue length to the assignment unit. The timeslot
7 assignment unit maintains timeslot records to store count numbers of
8 assigned timeslots, determines a total count number of timeslots assigned to
9 each end-user system during a period corresponding to the delay time of the
10 unit, and receives a queue length signal from each end-user system. From the
11 total count number and the queue length a virtual queue length is
12 determined for indicating the number of packets to which timeslots are still
13 not assigned. Based on the virtual queue length, timeslots are assigned to
14 each end-user system.

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